and the invention also relates to novel compounds of formula I and to a method of screening a surface from ultraviolet radiation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

(FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003)

FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003

L1	127629	S	SUNSCREEN? OR UV
L2	2960	S	CAROTENOID?
L3	1152	S	L1 AND L2
L4	941	S	POLYPHENOLIC
L5	8	S	L3 AND L4
L6	1	S	US5712311/PN
L7	1	S	L6 AND L2
L8	0	S	L4 AND L7
L9	7	S	SCYTONEMIN
L10	122030	S	AMINO ACID?
L11	0	S	L10 AND L6
L12	1	S	US5422247/PN
L13	1	S	US3920834/PN
L14	1	S	L12 AND L2
L15	1	S	L13 AND L2
L16	0	S	L10 AND L15
L17	0	S	L13 AND L10
L18	1	S	L12 AND L10
L19	45380	S	TRYPTOPHAN? OR TYROSINE?
L20	404	S	L3 AND L19
L21	0	S	L20 AND L9
L22	7	S	L9 AND L1
L23	2	S	L4 AND L20
L24	0	S	L4 AND L12
L25	3	S	MYCOSPORINE?
L26	3	S	L25 AND L1
L27	0	S	L5 AND L9
L28	0	S	PHENOLIC AND L12
L29	10772	S	ALGAE
L30	249499	S	ALGAE? OR PLANT?
L31	1	S	L30 AND L12
L32	1227	S	CYANOBACTERI?
L33	1	S	L32 AND L12
L34	7	S	L1 AND L9
L35	4	S	L2 AND L34
L36	1	S	US5508026/PN
L37	1	S	L36 AND L1
L38	1	S	L37 AND L2
L39	1	S	L38 AND L9
L40	0	S	L10 AND L39
L41	1	S	L12 AND L10

09/830193

Connecting via Winsock to STN

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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS	4	Jul 15	Data from 1960-1976 added to RDISCLOSURE
NEWS	5	Jul 21	Identification of STN records implemented
NEWS	6	Jul 21	Polymer class term count added to REGISTRY
NEWS	7	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
NEWS	8	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS	9	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
NEWS	10	AUG 15	PATDPAFULL: one FREE connect hour, per account, in September 2003
NEWS	11	AUG 15	PCTGEN: one FREE connect hour, per account, in September 2003
NEWS	12	AUG 15	RDISCLOSURE: one FREE connect hour, per account, in September 2003
NEWS	13	AUG 15	TEMA: one FREE connect hour, per account, in September 2003
NEWS	14	AUG 18	Data available for download as a PDF in RDISCLOSURE
NEWS	15	AUG 18	Simultaneous left and right truncation added to PASCAL
NEWS	16	AUG 18	FROSTI and KOSMET enhanced with Simultaneous Left and Righ Truncation
NEWS	17	AUG 18	Simultaneous left and right truncation added to ANABSTR
NEWS	18	SEP 22	DIPPR file reloaded

NEWS EXPRESS	April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

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* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

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FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003

=> file uspatfull
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 18 Sep 2003 (20030918/PD)
FILE LAST UPDATED: 18 Sep 2003 (20030918/ED)
HIGHEST GRANTED PATENT NUMBER: US6622308
HIGHEST APPLICATION PUBLICATION NUMBER: US2003177560
CA INDEXING IS CURRENT THROUGH 18 Sep 2003 (20030918/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 18 Sep 2003 (20030918/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2003
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2003

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent              <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s sunscreen? or uv
          6010 SUNSCREEN?
        124293 UV
L1      127629 SUNSCREEN? OR UV

=> s carotenoid?
L2         2960 CAROTENOID?

=> s l1 and l2
L3         1152 L1 AND L2

=> s polyphenolic
L4          941 POLYPHENOLIC

=> s l3 and l4
L5            8 L3 AND L4

=> d 1-8 ibib abs
```

L5 ANSWER 1 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2002:322572 USPATFULL
TITLE: Methods to measure lipid antioxidant activity
INVENTOR(S): Aldini, Giancarlo, Milan, ITALY
Yeum, Kyung-Jin, Winchester, MA, UNITED STATES
PATENT ASSIGNEE(S): TRUSTEES OF TUFTS COLLEGE (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002182736	A1	20021205	
APPLICATION INFO.:	US 2002-114181	A1	20020402	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-280920P	20010402 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: NUTTER MCCLENNEN & FISH LLP, WORLD TRADE CENTER WEST, 155 SEAPORT BOULEVARD, BOSTON, MA, 02210-2604
NUMBER OF CLAIMS: 43
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Page(s)
LINE COUNT: 2200
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a selective method for measuring lipid antioxidant activity within a lipid compartment of a sample using lipophilic radical generators and oxidizable lipophilic indicators. The present invention accurately and efficiently determines the total antioxidant activity of a sample in both lipid and aqueous compartments. The methods of the invention can be used for diagnosing and protecting against disorders that arise from excess free radicals present in a subject. The reagents used in the methods of the invention can also be provided in a kit assay.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2002:99102 USPATFULL
TITLE: Directed evolution of biosynthetic and biodegradation pathways
INVENTOR(S): Schmidt-Dannert, Claudia, Shoreview, MN, UNITED STATES
Arnold, Frances H., Pasadena, CA, UNITED STATES
PATENT ASSIGNEE(S): CALIFORNIA INSTITUTE OF TECHNOLOGY (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002051998	A1	20020502	
APPLICATION INFO.:	US 2000-733759	A1	20001208	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169594P	19991208 (60)
	US 2000-211894P	20000614 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY, 10022
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 4167
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to engineering new biosynthetic pathways into microorganisms, in particular biosynthetic **carotenoid** pathways. New and improved catalytic functions of metabolic pathways are created by, for example, site-specific mutation or gene shuffling techniques, to provide for efficient biosynthesis of **carotenoids** . By applying the described directed evolution techniques, almost any **carotenoid** could be produced, in a host cell, from one or a few sets of genes. In addition, the described techniques are useful for creating gene or protein libraries for new and uncharacterized **carotenoids**.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2002:95749 USPATFULL
TITLE: Cleaning compositions comprising a specific oxygenase
INVENTOR(S): Herbots, Ivan Maurice Alfons Jan, Procter & Gamble Eurocor N.V. 100Temselaan, B-1853 Strombeek-Bever, BELGIUM
Barnabas, Mary Vijayarani, The Procter & Gamble Company, Miami Valley Labs. 11810 E. Miami River Rd., Cincinnati, OH, United States 45061
Bettiol, Jean-Luc Philippe, Procter & Gamble Eurocor N.V. 100 Temselaan, B-1853 Strombeek-Bever, BELGIUM
Busch, Alfred, Procter & Gamble Eurocor N.V. 100 Temselaan, B-1853 Strombeek-Bever, BELGIUM

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6380145	B1	20020430	
	WO 9902639		19990121	
APPLICATION INFO.:	US 2000-462559		20000110	(9)
	WO 1997-US12439		19970709	
			20000110	PCT 371 date

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Gupta, Yogendra N.
ASSISTANT EXAMINER: Elhilo, Eisa
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 2894
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to cleaning compositions, including laundry, fabric care, dishwashing, hard surface cleaner, oral/dental cleaning compositions, comprising a polyphenol/heterocyclic substrate based oxygenase, which provide effective and efficient cleaning of coloured and everyday body stains and/or soils and provides sanitisation of the treated surfaces. Furthermore, the cleaning compositions of the present invention provide fabric realistic items cleaning and whitening performance while providing excellent fabric colour safety when formulated as a laundry detergent composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2002:31986 USPATFULL
TITLE: Compositions and methods for improving vascular health
INVENTOR(S): Schmitz, Harold H., Branchburg, NJ, UNITED STATES
Chevaux, Kati A., Seattle, WA, UNITED STATES
Dombroski, Amy, Stanhope, NJ, UNITED STATES
Jerome, Ralph, Blairstown, NJ, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002018807	A1	20020214	
	US 6610320	B2	20030826	
APPLICATION INFO.:	US 2001-829782	A1	20010410	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-197135P	20000414 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Clifford Chance Rogers & Wells LLP, 200 Park Avenue, New York, NY, 10166-0153
NUMBER OF CLAIMS: 43
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 1579
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to compositions containing polyphenols, for example, cocoa polyphenols such as procyanidins, in combination with at least one cholesterol lowering agent, and methods for improving vascular health including treating and preventing atherosclerosis and cardiovascular disease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2000:168053 USPATFULL
TITLE: 6',7'-dihydroxybergamottin, a cytochrome P450 inhibitor in grapefruit
INVENTOR(S): Edwards, David J., LaSalle, Canada
Woster, Patrick M., Canton, MI, United States
PATENT ASSIGNEE(S): Wayne State University, Detroit, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6160006		20001212	
APPLICATION INFO.:	US 1997-951330		19971016	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-28961P	19961018 (60)
	US 1997-54332P	19970624 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Richter, Johann
ASSISTANT EXAMINER: Solola, Taofiq A.
LEGAL REPRESENTATIVE: Lahive & Cockfield, LLP
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1149
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a composition and methods for inhibiting cytochrome P450 enzyme activity and in particular, inhibiting the activity of the cytochrome P450 3A sub-family of enzymes, specifically, CYP3A4. The present invention provides 6',7'-dihydroxybergamottin, a furanocoumarin, as the compound primarily responsible for the inhibitory effects of grapefruit juice on cytochrome P450 enzyme activity. The present invention also provides a novel synthesis scheme for

6',7'-dihydroxybergamottin.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 8 USPATFULL on STN

ACCESSION NUMBER:	2000:121077 USPATFULL			
TITLE:	Use of compositions comprising stabilized biologically effective compounds			
INVENTOR(S):	Edens, Luppo, Rotterdam, Netherlands Tan, Hong Sheng, Bleiswijk, Netherlands Lambers, Johannes Wilhelmus Jacobus, Pijnacker, Netherlands			
PATENT ASSIGNEE(S):	DSM N.V., Te Heerlen, Netherlands (non-U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6117433		20000912	
	WO 9727841		19970807	
APPLICATION INFO.:	US 1998-930685		19980428	(8)
	WO 1997-EP507		19970131	
			19980408	PCT 371 date
			19980408	PCT 102(e) date
	NUMBER		DATE	
PRIORITY INFORMATION:	EP 1996-200190		19960131	
	EP 1996-200594		19960308	
	EP 1996-201713		19960621	
	EP 1996-202781		19961003	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Levy, Neil S.			
LEGAL REPRESENTATIVE:	Morrison & Foerster LLP			
NUMBER OF CLAIMS:	26			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)			
LINE COUNT:	1319			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A dual chambered dispensing system allows for application of an aqueous composition containing a biologically effective compound which is adequately stabilized. The system separately contains the stabilized biologically effective compound composition in one chamber and an aqueous basic composition in the other. Both compositions are simultaneously delivered from the dispensing system, whereupon the compositions are mixed to result in a final composition suitable for direct application.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 8 USPATFULL on STN

ACCESSION NUMBER:	2000:101887 USPATFULL			
TITLE:	Dry composition containing flavonol useful as a food supplement			
INVENTOR(S):	Howard, Alan Norman, Cambridge, United Kingdom Nigdikar, Shailja Vijay, Suffolk, United Kingdom Rajput-Williams, Jayshri, Cambridge, United Kingdom Williams, Norman Ross, Cambridgeshire, United Kingdom			
PATENT ASSIGNEE(S):	The Howard Foundation, Cambridge, United Kingdom (non-U.S. corporation)			
	NUMBER	KIND	DATE	

PATENT INFORMATION:	US 6099854		20000808
APPLICATION INFO.:	US 1997-934055		19970919 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1996-19700	19960920
	GB 1997-11171	19970531
	GB 1997-11172	19970531
	GB 1997-11173	19970531

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Faulkner, D.
LEGAL REPRESENTATIVE: Pillsbury Madison & Sutro LLP
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1544
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A flavonol-containing dry composition derived from wine and useful as a food supplement is provided wherein at least 25% of the composition derived from wine includes polyphenols and at least 1.0% w/w of the composition is flavonol.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2000:87741 USPATFULL
TITLE: Food supplements
INVENTOR(S): Howard, Alan Norman, Cambridge, United Kingdom
Nigdikar, Shailja Vijay, Suffolk, United Kingdom
Rajput-Williams, Jayshri, Cambridge, United Kingdom
Williams, Norman Ross, Cambridgeshire, United Kingdom
PATENT ASSIGNEE(S): The Howard Foundation, Cambridge, United Kingdom (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6086910		20000711
APPLICATION INFO.:	US 1997-978158		19971125 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1997-934055, filed on 19 Sep 1997
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: MacMillan, Keith D.
ASSISTANT EXAMINER: Faulkner, D.
LEGAL REPRESENTATIVE: Pillsbury Madison & Sutro
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1561
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed is a flavonol-containing dry composition suitable for human consumption, together with uses thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s us5712311/pn
L6 1 US5712311/PN

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=> d his

     (FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003)

     FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003
L1       127629 S SUNSCREEN? OR UV
L2         2960 S CAROTENOID?
L3         1152 S L1 AND L2
L4          941 S POLYPHENOLIC
L5            8 S L3 AND L4
L6            1 S US5712311/PN

=> s l6 and l2
L7            1 L6 AND L2

=> s l4 and l7
L8            0 L4 AND L7

=> d kwic l7

L7   ANSWER 1 OF 1  USPATFULL on STN
TI     Cosmetic or dermatological composition with controlled release of active
       principle containing a photoconvertible carotenoid
PI     US 5712311              19980127                              <--
AB     The invention relates to a cosmetic or dermatological composition with
       controlled release of active principle containing at least
       photoconvertible carotenoid, capable of being converted to
       retinol and retinoic acid or its isomers, of following formula (I):
       ##STR1## in which the. . .
SUMM   The present invention relates to the use of a photoconvertible
       carotenoid for protecting the skin against photoaging and for
       preventing acne and to a cosmetic or dermatological composition with
       controlled release of active principle containing a photoconvertible
       carotenoid.
SUMM   . . . retinol and retinoic acid and its isomers, could be released on
       the skin in a controlled way by photoconversion of carotenoids
       via hydrophilic activated forms of oxygen.
SUMM   The subject of the present invention is therefore the use of a
       photoconvertible carotenoid of formula: ##STR3## in which the
       R.sub.1 and R.sub.2 substituents denote one of the following groups:
       ##STR4## at least one. . .
SUMM   The carotenoid of formula (I) is more particularly chosen from
       .beta.-carotene, .alpha.-carotene, .gamma.-carotene, canthaxanthin,
       lutein, zeaxanthin and astaxanthin.
SUMM   The photoconvertible carotenoids of formula (I) used according
       to the invention are precursors of retinoids which, under the effect of
       an "oxidative stress",. . .
SUMM   . . . subject of the invention is a cosmetic or dermatological
       composition with controlled release of active principle containing at
       least one carotenoid capable of being converted to retinol and
       retinoic acid and its isomers having the formula (I) above.
SUMM   . . . to the invention contains 0.0001 to 10% by weight, and
       preferably 0.0001 to 5% by weight, of at least one carotenoid
       of formula (I) as defined above, in a cosmetically or dermatologically
       acceptable medium.
SUMM   Another subject of the present invention is the use of a
       photoconvertible carotenoid of formula (I) as defined above
       for the manufacture of a cosmetic or dermatological composition intended
       for the prevention of. . .
CLM    What is claimed is:
 . . . of protecting it against photoaging which comprises applying to the
       skin an effective amount for protecting it of a photoconvertible
```

carotenoid capable of being converted to retinol and retinoic acid or its isomers of formula: ##STR5## in which the R.sub.1 and. . . 3. The process of claim 1 wherein the photoconvertible **carotenoid** of formula (I) is selected from the group consisting of .beta.-carotene, .alpha.-carotene, .gamma.-carotene, canthaxanthin, lutein, zeaxanthin and astaxanthin.

4. A cosmetic or dermatological composition with controlled release of active principle, which contains at least one photoconvertible **carotenoid**, capable of being converted to retinol and retinoic acid or its isomers, of following formula (I): ##STR7## in which the. . . . . A process for the prevention or control of acne which comprises applying to the skin an effective amount of a **carotenoid** of formula: ##STR9## in which the R.sub.1 and R.sub.2 substituents denote one of the following groups: ##STR10## at least one. . . 16. The process of claim 14, wherein the **carotenoid** is selected from the group consisting of .beta.-carotene, .alpha.-carotene, .gamma.-carotene, canthaxanthin, lutein, zeaxanthin and astaxanthin.

```
=> s scytonemin
L9            7 SCYTONEMIN

=> s amino acid?
         271907 AMINO
         704293 ACID?
L10      122030 AMINO ACID?
                  (AMINO(W)ACID?)

=>

=> d his

     (FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003)

     FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003
L1        127629 S SUNSCREEN? OR UV
L2          2960 S CAROTENOID?
L3          1152 S L1 AND L2
L4           941 S POLYPHENOLIC
L5             8 S L3 AND L4
L6             1 S US5712311/PN
L7             1 S L6 AND L2
L8             0 S L4 AND L7
L9             7 S SCYTONEMIN
L10       122030 S AMINO ACID?

=> s l10 and l6
L11           0 L10 AND L6

=> s us5422247/pn
L12           1 US5422247/PN

=> s us3920834/pn
L13           1 US3920834/PN

=> s l12 and l2
L14           1 L12 AND L2

=> s l13 and l2
```

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L15          1 L13 AND L2

=> s l10 and l15
L16          0 L10 AND L15

=> s l13 and l10
L17          0 L13 AND L10

=> s l12 and l10
L18          1 L12 AND L10

=> d kwic

L18  ANSWER 1 OF 1  USPATFULL on STN
PI     US 5422247              19950606                              <--
DETD   . . . hydrolysates, microbial biomass hydrolysates, soy meal, fish
       meal, meat meal, meat extract, peptone, tryptone, corn steep liquor,
       yeast extract, and amino acids.


=> s tryptophan? or tyrosine?
         27896 TRYPTOPHAN?
         37319 TYROSINE?
L19      45380 TRYPTOPHAN? OR TYROSINE?

=> d his

     (FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003)

     FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003
L1      127629 S SUNSCREEN? OR UV
L2        2960 S CAROTENOID?
L3        1152 S L1 AND L2
L4         941 S POLYPHENOLIC
L5           8 S L3 AND L4
L6           1 S US5712311/PN
L7           1 S L6 AND L2
L8           0 S L4 AND L7
L9           7 S SCYTONEMIN
L10     122030 S AMINO ACID?
L11          0 S L10 AND L6
L12          1 S US5422247/PN
L13          1 S US3920834/PN
L14          1 S L12 AND L2
L15          1 S L13 AND L2
L16          0 S L10 AND L15
L17          0 S L13 AND L10
L18          1 S L12 AND L10
L19      45380 S TRYPTOPHAN? OR TYROSINE?

=> s l3 and l19
L20        404 L3 AND L19

=> s s l20 and l9
MISSING OPERATOR S L20
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l20 and l9
L21          0 L20 AND L9

=> s l9 and l1
```

L22 7 L9 AND L1

=> s l4 and l20
L23 2 L4 AND L20

=> d 1-2 ibib abs

L23 ANSWER 1 OF 2 USPATFULL on STN
ACCESSION NUMBER: 2002:99102 USPATFULL
TITLE: Directed evolution of biosynthetic and biodegradation pathways
INVENTOR(S): Schmidt-Dannert, Claudia, Shoreview, MN, UNITED STATES
Arnold, Frances H., Pasadena, CA, UNITED STATES
PATENT ASSIGNEE(S): CALIFORNIA INSTITUTE OF TECHNOLOGY (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002051998	A1	20020502
APPLICATION INFO.:	US 2000-733759	A1	20001208 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169594P	19991208 (60)
	US 2000-211894P	20000614 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY, 10022
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 4167
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to engineering new biosynthetic pathways into microorganisms, in particular biosynthetic **carotenoid** pathways. New and improved catalytic functions of metabolic pathways are created by, for example, site-specific mutation or gene shuffling techniques, to provide for efficient biosynthesis of **carotenoids** . By applying the described directed evolution techniques, almost any **carotenoid** could be produced, in a host cell, from one or a few sets of genes. In addition, the described techniques are useful for creating gene or protein libraries for new and uncharacterized **carotenoids**.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L23 ANSWER 2 OF 2 USPATFULL on STN
ACCESSION NUMBER: 2002:95749 USPATFULL
TITLE: Cleaning compositions comprising a specific oxygenase
INVENTOR(S): Herbots, Ivan Maurice Alfons Jan, Procter & Gamble Eurocor N.V. 100Temselaan, B-1853 Strombeek-Bever, BELGIUM
Barnabas, Mary Vijayarani, The Procter & Gamble Company, Miami Valley Labs. 11810 E. Miami River Rd., Cincinnati, OH, United States 45061
Bettiol, Jean-Luc Philippe, Procter & Gamble Eurocor N.V. 100 Temselaan, B-1853 Strombeek-Bever, BELGIUM
Busch, Alfred, Procter & Gamble Eurocor N.V. 100 Temselaan, B-1853 Strombeek-Bever, BELGIUM

	NUMBER	KIND	DATE

09/830193

PATENT INFORMATION: US 6380145 B1 20020430
WO 9902639 19990121
APPLICATION INFO.: US 2000-462559 20000110 (9)
WO 1997-US12439 19970709
20000110 PCT 371 date
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Gupta, Yogendra N.
ASSISTANT EXAMINER: Elhilo, Eisa
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 2894
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to cleaning compositions, including laundry, fabric care, dishwashing, hard surface cleaner, oral/dental cleaning compositions, comprising a polyphenol/heterocyclic substrate based oxygenase, which provide effective and efficient cleaning of coloured and everyday body stains and/or soils and provides sanitisation of the treated surfaces. Furthermore, the cleaning compositions of the present invention provide fabric realistic items cleaning and whitening performance while providing excellent fabric colour safety when formulated as a laundry detergent composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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(FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003)

FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003
L1 127629 S SUNSCREEN? OR UV
L2 2960 S CAROTENOID?
L3 1152 S L1 AND L2
L4 941 S POLYPHENOLIC
L5 8 S L3 AND L4
L6 1 S US5712311/PN
L7 1 S L6 AND L2
L8 0 S L4 AND L7
L9 7 S SCYTONEMIN
L10 122030 S AMINO ACID?
L11 0 S L10 AND L6
L12 1 S US5422247/PN
L13 1 S US3920834/PN
L14 1 S L12 AND L2
L15 1 S L13 AND L2
L16 0 S L10 AND L15
L17 0 S L13 AND L10
L18 1 S L12 AND L10
L19 45380 S TRYPTOPHAN? OR TYROSINE?
L20 404 S L3 AND L19
L21 0 S L20 AND L9
L22 7 S L9 AND L1
L23 2 S L4 AND L20

=> s l4 and l12
L24 0 L4 AND L12

=> s mycosporine?
L25 3 MYCOSPORINE?

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=> s l25 and l1
L26          3 L25 AND L1

=> d 1-3 ibib abs

L26  ANSWER 1 OF 3  USPATFULL on STN
ACCESSION NUMBER:        2003:37219  USPATFULL
TITLE:                   Process for the preparation of an extract with
                         carotenoids, UV absorption, antibacterial and
                         pH indicating properties from a deep-sea bacterium
INVENTOR(S):             Bharathi, Ponnapakkam Adikesavan Loka, Dona Paula,
                         INDIA
                         Nair, Shanta, Dona Paula, INDIA
                         Chandramohan, Dorairajasingham, Dona Paula, INDIA

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2003026863      A1   20030206
APPLICATION INFO.:       US 2001-825406     A1   20010403  (9)
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    Cooper & Dunham LLP, 1185 Avenue of the Americas, New
                         York, NY, 10036
NUMBER OF CLAIMS:        19
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      5 Drawing Page(s)
LINE COUNT:              618
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       Accordingly the present invention provides a process for the preparation
         an alcoholic extract with Carotenoids, UV absorption,
         antibacterial and pH indicating properties from a deep-sea bacterium
         which comprises a method for growing the cells in a medium with salinity
         ranging from 1.5 to 3% for 3-4 days at 28 +/-2.degree. C. and harvesting
         them to prepare an extract which shows the properties of carotenoids
         (yellow/orange coloration), UV absorption, antibacterial and
         pH indicator properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L26  ANSWER 2 OF 3  USPATFULL on STN
ACCESSION NUMBER:        94:86519  USPATFULL
TITLE:                   Sunscreen compounds
INVENTOR(S):             Bird, Graham, Victoria, Australia
                         Fitzmaurice, Neil, Victoria, Australia
                         Dunlap, Walter C., Queensland, Australia
                         Chalker, Bruce E., Queensland, Australia
                         Bandaranayake, Wickramasinghe M., Queensland, Australia
PATENT ASSIGNEE(S):      ICI Australia Operations Proprietary Limited,
                         Melbourne, Australia (non-U.S. corporation)

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 5352793                19941004
APPLICATION INFO.:       US 1990-618610            19901127  (7)
RELATED APPLN. INFO.:    Division of Ser. No. US 1988-236530, filed on 26 May
                         1988, now patented, Pat. No. US 5100496

                                NUMBER          DATE
                         ------------------ --------
PRIORITY INFORMATION:    AU 1986-8208       19860926
                         AU 1986-9230       19861125
DOCUMENT TYPE:           Utility
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09/830193

FILE SEGMENT: Granted
PRIMARY EXAMINER: Cintins, Marianne M.
ASSISTANT EXAMINER: Spivack, Phyllis G.
LEGAL REPRESENTATIVE: Cushman, Darby & Cushman
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 1320
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to **sunscreen** compounds of formula I ##STR1## wherein R.sup.1 is selected from alkyl, alkenyl, alkynyl substituted alkyl, substituted alkenyl, phenyl, substituted phenyl, substituted benzyl, cycloalkyl, cycloalkenyl, substituted cycloalkyl, substituted cycloalkenyl;

R.sup.2 is selected from hydrogen, alkyl and alkoxy;

R.sup.3 is selected from alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, phenyl, benzoyl, substituted phenyl, substituted benzyl, substituted benzoyl, cycloalkyl, substituted cycloalkyl, cycloalkenyl, substituted cycloalkenyl, alkanyoyl, substituted alkanoyl, the group ORORO R.sup.9 wherein R is a bivalent hydrocarbon radical and R.sup.9 is alkyl, alkenyl, phenyl benzyl, substituted phenyl, substituted benzyl;

R.sup.4 is alkyl or alkoxy;

n is an integer from 0 to 4; and

R.sup.5 and R.sup.6 are independently selected from alkyl, alkoxy, alkanoyl, alkanoyl substituted by hydroxyl or alkoxycarbonyl.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L26 ANSWER 3 OF 3 USPATFULL on STN
ACCESSION NUMBER: 91:22460 USPATFULL
TITLE: **Sunscreen** compositions and compounds for use therein
INVENTOR(S): Bird, Graham, 14 Roseberry Street, Ascot Vale 3032, Victoria, Australia
Fitzmaurice, Neil, 44 Tooronga Road, Malvern East 3144, Victoria, Australia
Dunlap, Walter C., 70 Cook Street, North Ward, Townsville 4810, Queensland, Australia
Chalker, Bruce E., 3178 Eyre Street, North Ward, Townsville 4810, Queensland, Australia
Bandaranayake, Wickramasinghe M., 12 Lupin Court, Annansdale, Murray, Townsville 4812, Queensland, Australia

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5000946		19910319	
	WO 8802251		19880407	
APPLICATION INFO.:	US 1988-236530		19880526	(7)
	WO 1987-AU330		19870925	
			19880526	PCT 371 date
			19880526	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	AU 1986-8208	19860926
	AU 1986-9230	19861128

09/830193

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Ore, Dale R.
LEGAL REPRESENTATIVE: Cushman, Darby & Cushman
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 1324
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to **sunscreen** compositions comprising an effective component at least one compound of formula I ##STR1## wherein R.sup.1 is selected from alkyl, alkenyl, alkynyl substituted alkyl, substituted alkenyl, phenyl, substituted phenyl, substituted benzyl, cycloalkyl, cycloalkenyl, substituted cycloalkyl, substituted cycloalkenyl and polymeric groups;

R.sup.2 is selected from hydrogen, alkyl and alkoxy; and wherein R.sup.1 and R.sup.2 may form a carbocyclic ring which may be substituted;

R.sup.3 is selected from alkyl, sustituted alkyl, alkenyl, substituted alkenyl, alkynyl, phenyl, benzoyl, substituted phenyl, substituted benzyl, substituted benzoyl, cycloalkyl, substituted cycloalkyl, cycloalkenyl, substituted cycloalkenyl, alkanyoyl, substituted alkanoyl, polymeric groups, the group ORORORR.sup.9 wherein R is a bivalent hydrocarbon radical and R.sup.9 is alkyl, alkenyl, phenyl benzyl, substituted phenyl, substituted benzyl;

R.sup.4 is alkyl or alkoxy; n is an integer from 0 to 4; and

R.sup.5 and R.sup.6 are independently selected from alkyl, alkoxy, alkanoyl, alkanoyl substituted by hydroxyl or alkoxycarbonyl and R.sup.5 and R.sup.6 may form a spiro carbocyclic ring which may be substituted with alkyl;

and the invention also relates to novel compounds of formula I and to a method of screening a surface from ultraviolet radiation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 1-3 kwic

L26 ANSWER 1 OF 3 USPATFULL on STN
TI Process for the preparation of an extract with carotenoids, **UV** absorption, antibacterial and pH indicating properties from a deep-sea bacterium
AB Accordingly the present invention provides a process for the preparation an alcoholic extract with Carotenoids, **UV** absorption, antibacterial and pH indicating properties from a deep-sea bacterium which comprises a method for growing the cells in a. . . days at 28 +/-2.degree. C. and harvesting them to prepare an extract which shows the properties of carotenoids (yellow/orange coloration), **UV** absorption, antibacterial and pH indicator properties.
SUMM [0001] The present investigation relates to a process for the preparation of an extract with Carotenoids, **UV** absorption, antibacterial and pH indicating from a deep-sea bacterium for applications in food and cosmetic industries. The extract could be used as food and feed additives (colorant), food and feed preservatives and radio protective I **sunscreen** compound in cosmetics.
SUMM . . . broth is extracted and purified to form a clear solution. The cosmetic is useful for whitening skin, or as a **sunscreen**. In an example G172 was grown at 25 deg for 5 days, centrifuged and maintained at -20 deg overnight to. . .

SUMM . . . Japanese Patent No.JP07010736; 13.01.95; 128:66319 Coupland, Keith; Packer, Clarie Elizabeth (Croda International PLC; Coupland, Keith; Packer, Claire Elizabeth, UK) titled: "**Sunscreen** compositions comprising stearidonic acid and derivatives in combination with a **UV** blocking and/or absorbing material", describes "A **sunscreen** composition comprising a stearidonic acid, or a physiol. deriv. thereof, in combination with a **UV** blocking and/or **UV** absorbing material, is claimed. Also stearidonic acid may be used to treat inflammation caused by exposure to **UV** radiation, by exposure to sunlight or by burns. Thus, 10 kg of the seeds of Echium plantagineum were crushed and. . . 1741 g of golden yellow oil. The oil was converted to the corresponding fatty acid Me esters and used in **sunscreens**. A **sunscreen** oil was prepared containing Bu methoxydibenzoyl methane 2.0, octyl methoxy-cinnamate 7.5, benzophenone-3 4 5, PPG-2 myristyl ether propionate 10.0, above. . .

SUMM [0012] Most of the commercially available **UV**-blocking compounds in skin cream (**sunscreen**) are synthetic and the search for natural compounds with equal or greater efficiency is becoming more significant because of the. . .

SUMM [0013] The **UV**-absorbing properties of either the organisms or the extract have been extensively studied in higher plants, corals, cyanobacteria and other phytoplankton. Reference may be made to an **UV** absorbing (310 nm) compound that has been characterised from stem, bark and roots of mangrove plant, Heritiera littoralis (Bandaranayake W. . . Australia. Aust Inst Mar Sci Rep Townsville, Old Australia AIMS 19, 28pp). The hyperoxic tissues of coral reefs also produce **UV** absorbing **mycosporine** like compounds (Dunlap W C Shick J M 1998. Ultraviolet radiation absorbing **mycosporine**-like amino acids in coral reef organisms: A biochemical and environmental perspective. J.Phycol. 34(3), 418-430). The induction and protective role of the **UV**-absorbing compounds such as **mycosporine**-like amino acids (MAAs) have been noted even in Florideophyceae (Franklin L A, Yakovleva.I, Karsten U, Luenig, K 1999. Synthesis of. . . also known to possess intense carotenoid pigments to protect themselves against intense solar radiation. Some algae have other type of **UV**-absorbing (**sunscreen**) pigments like scytonemin (Proteau ,P. J., Gerwick, W. H. Garcia-Pichel F. Castenholz 1993. The structure of scytonemin an ultraviolet **sunscreen** pigment from the sheath of cyanobacteria. Experientia 49, 825-829). These **UV** absorbing compounds are also known to be produced under photoinductive conditions and are dependant on temporal factors (Hannach G, Sigleo A C 1998. Photoinduction of **UV** absorbing compounds in six species of marine phytoplankton. Mar. Ecol. Prog Ser 174; 207-222). Though a number of papers have. . . publications on this aspect of bacteria (Arai T. Nishijima M, Adachi K Sano H 1992. Isolation and structure of a **UV** absorbing substance from the marine bacterium Micrococcus sp AK 334. Marine Biotech Inst Rep. Pp88-94 Japan). **Sunscreen** compositions comprising natural products of marine hydroid and derivatives thereof have been patented as useful **sunscreening** agents (lindquist, N. l. 1998 U.S. Pat. No. 5,705,146). A **sunscreen**/radioprotective compound has also been patented from fungus Aspergillus versicolor FK17 95-03294 (JP-06329576). Though bacteria possess a number of pigments that are supposedly photo protective only a few have been used for extracting **UV** A and B absorbing components. A fat-soluble **UV** absorbing compound F-1547 from Paracoccus sp has been patented (JP-1 1269175). A process for producing **UV** absorbing **mycosporine**-like aminoacids (MAA) from Micrococcus sp has also been developed (JP-06062878-A).

SUMM . . . objects of the present investigation are to provide a process for the preparation of an alcoholic extract, having Carotenoids

property, **UV** absorption, antibacterial and pH indicating properties.

SUMM [0021] Accordingly the present invention provides a process for the preparation an alcoholic extract with Carotenoids, **UV** absorption, antibacterial and pH indicating properties from a deep-sea bacterium which comprises a method for growing the cells in a. . . 3-4 days at 28+/-2.degree. C. and harvesting them to prepare an extract which shows the properties of carotenoids (yellow/orange coloration), **UV** absorption, antibacterial and pH indicator properties.

SUMM . . . at 500 atm and at 1 atm pressure and the petroleum ether fraction of the bacterium when scanned in an **UV** visible spectrometer shows characteristic peaks at 448 nm with shoulders at 430 and 470 nm, which is similar to the. . .

SUMM [0024] In another embodiment of the invention, the alcoholic extract of the said bacterium having caroteniods, **UV** absorption, anti bacterial, pH indicating properties.

SUMM . . . different uses. The native extract of the culture is a pigment complex, which is yellow to orange in colour, has **UV** absorbing property and is antibacterial against some of the Gram-positive and Gram-negative bacteria.

SUMM . . . inventors has led to the preparation of single extract from a single bacterial isolate which shows multiple properties of colour, **UV** absorption, antibacterial property against both Gram-positive and Gram-negative bacteria, and pH indicator property. As a food additive, the preparation would. . .

SUMM . . . 1.5% NaCl, extracting with alcohol for 2-3 times and obtaining an extract which shows the properties of carotenoids (yellow/orange colour), **UV** absorption, antibacterial and pH indicator. In another embodiment, the solvent used for extraction is an alcohol preferably methanol. In still another embodiment, the extract is used as **UV** (A, B, C) absorbing compound. In still another embodiment, the extract inhibits growth of Gram-positive and Gram-negative bacteria.

SUMM [0030] The present invention provides a process for the preparation an alcoholic extract with Carotenoids, **UV** absorption, antibacterial and pH indicating properties from a deep-sea bacterium for use in food and cosmetic industries which comprises a. . . for 3-4 days 28+/-2.degree. C. and harvesting them to prepare an extract which shows the properties of carotenoids (yellow/orange coloration), **UV** absorption, antibacterial and pH indicator properties.

SUMM [0032] In another embodiment of the present invention, the extract possesses **UV** absorbing property. In yet another embodiment of the present invention, the extract has antibacterial agent characteristics.

SUMM [0035] In another embodiment of the invention provides a composition for a **sunscreen** compound, said composition comprising, 25 to 75 mg methanolic extract of the bacterium claimed in claim 1, with 4 to. . .

DETD . . . as shown in Example 1 was partitioned with 10-ml petroleum ether and scanned from 260 to 550 nm in a **UV**-visible spectrometer. In petroleum ether, peaks at 448 nm with shoulders at 430 and 470 nm showed that it is a. . .

DETD . . . extractas shown in Example 1 was diluted to 4 ml with 100% methanol and scanned from 280 to 400 nm. **UV** absorbing property between 280 to 380 mn was observed with a peak at 340 mn (UVA). This property can also. . .

DETD . . . - - - +

2 antibacterial +/- + + + +/- - + + G +ve G +ve and G -ve

3 **UV** - - - - - - + +

absorbing
compound
4 **UV** + - - - -
- - - + -
Color
5 **UV** + - - - -
- - - + -
antimicrobial
6 **UV** + - - - -
- - - + -
Antimicrobial + - - - - -
- - + -
Color

Ref:. . .
CLM What is claimed is:
. . . 3. Novel bacterium as claimed in claim 1 wherein, the petroleum ether fraction of the bacterium when scanned in an **UV** visible spectrometer shows characteristic peaks at 448 nm with shoulders at 430 and 470 nm, which is similar to the. . .
4. Novel bacterium as claimed in claim 1 wherein, the alcoholic extract of the said bacterium having caroteniods, **UV** absorption, anti bacterial, pH indicating properties.

. . . NaCl, extracting with alcohol for 2- 3 times and obtaining an extract which shows the properties of carotenoids (yellow/orange colour), **UV** absorption, antibacterial and pH indicator.

8. A process as claimed in claim 6 wherein, the extract is used as **UV** (A, B, C) absorbing compound.

11. A composition for a **sunscreen** compound, said composition comprising, 25 to 75 mg methanolic extract of the bacterium claimed in claim 1, with 4 to. . .

L26 ANSWER 2 OF 3 USPATFULL on STN
TI **Sunscreen** compounds
AB The invention relates to **sunscreen** compounds of formula I ##STR1## wherein R.sup.1 is selected from alkyl, alkenyl, alkynyl substituted alkyl, substituted alkenyl, phenyl, substituted phenyl,. . .
SUMM The invention relates to **sunscreen** compositions comprising ultra-violet radiation absorbing compounds to methods of preparing such compositions, and to **UV**-absorbing compounds of particular use in preparing such compositions.
SUMM **Sunscreen** compositions may be used to form a coating for protecting substrates from harmful effects of ultraviolet radiation such as in solar radiation. For example, **sunscreen** compositions are probably best known for use in the protection of skin against severe erythra edema which can be caused. . .
SUMM Common commercially available **UV**-agents include, for example, para-aminobenzoic acid derivatives, benzotriazoles, benzophenones, methoxycinnamates and salicylates. It has been proposed, for example in U.K. Patent. . . 2,120,549A and French Patent Application 8301391, that certain specific classes of vinylagous amide compounds (enaminoketones) may also be used as **UV**-absorbing **sunscreen** agents.
SUMM We have observed that certain **mycosporine** amino acids which exist in the living tissue of the Pacific staghorn coral Acropora formosa are functional **UV**-absorbing agents (.lambda.max 310-332 nm) in corals inhabiting the shallow-water, tropical coral reef environment. While these naturally occurring enaminoketone compounds

appear to be potentially attractive as commercial **UV**-agents, their utility is questionable because of the difficulty of isolating them from their biological source and because of their lack. . . We have proposed that certain synthetic vinylagous amide analogues of those natural products can be prepared which preserves their characteristic **UV**-absorbing chromophore within a chemically more stable structure and which typically have **UV**-absorption maxima (.lambda.max) in the wavelength region 288-340 nanometers (P.C.T. Patent Application PCT/AU85/00242). These synthetic analogues, however, proved to be chemically. . .

SUMM . . . that a select group of cyclic vinylogous amide compounds which comprise a tetrahydropyridine moiety are particularly suitable for use in **sunscreen** compositions.

SUMM Accordingly we provide a **sunscreen** composition comprising as an effective component thereof at least one compound of formula I ##STR2## wherein: R.sup.1 is selected from. . .

SUMM In a further embodiment of the invention, there is provided a method of preparation of a **sunscreen** composition comprising mixing at least one compound of formula I with a carrier suitably adapted to allow application of said. . .

SUMM One group of compounds of the invention which may be used in preparation of **sunscreen** compositions include compounds of formula Ia ##STR19## wherein

SUMM The **UV**-B region of ultra violet radiation (290-320 nm) has long been known to cause damage to skin but more recently concern has been expressed over the effect of **UV**-A radiation (above 320 nm).

SUMM . . . the present invention may be prepared comprising one or more compounds of formula I and may provide screening in the **UV**-A region, the **UV**-B region or in both of these regions.

SUMM A specific example of a **sunscreen** formulation which may be used in preparation of compositions of the present invention includes the following

SUMM

Sunscreen lotion composition

	% w/w
Methyl para-hydroxy benzoate	0.25
Propyl para-hydroxy benzoate	0.10
Cetyl/Stearyl 2-Ethylhexanoate	2.00
"CARBOMER" 491 thickener (cross linked acrylic acid polymer)	0.45
Phenyl trimethicone	1.00
Stearic Acid	3.00
Sodium Hydroxide	0.15
Phenoxyethanol	0.30
Isopropyl Isostearate	5.00
Antioxidant (BHA, BHT, ascorbates, tocopherols)	0.08
Glyceryl Monostearate & PEG 100 Stearate	1.00
Fragrance	0.10
Sunscreen Compound	6.00
Disodium EDTA	0.05
Treated water	80.52

("CARBOMER" is a trade mark)

DETD TABLE 2

Com-pound No.	Appearance	UV spectra .lambda.max (nm)	log E	'H N.M.R. .delta. in ppm (CDCl.sub.3)
1	pale yellow	312	4.47	1.20 s 3H

. . .

DETD **Sunscreen** compositions were prepared using the components shown in table 2.

L26 ANSWER 3 OF 3 USPATFULL on STN

TI **Sunscreen** compositions and compounds for use therein

AB The invention relates to **sunscreen** compositions comprising an effective component at least one compound of formula I ##STR1## wherein R.sup.1 is selected from alkyl, alkenyl,. . .

SUMM The invention relates to **sunscreen** compositions comprising ultra-violet radiation absorbing compounds to methods of preparing such compositions, and to **UV**-absorbing compounds of particular use in preparing such compositions.

SUMM **Sunscreen** compositions may be used to form a coating for protecting substrates from harmful effects of ultraviolet radiation such as in solar radiation. For example, **sunscreen** compositions are probably best known for use in the protection of skin against severe erythra edema which can be caused. . .

SUMM Common commercially available **UV**-agents include, for example, para-aminobenzoic acid derivatives, benzotriazoles, benzophenones, methoxycinnamates and salicylates. It has been proposed, for example in U.K. Pat.. . . and French Pat. application No. 8301391, that certain specific classes of vinylagous amide compounds (enaminoketones) may also be used as **UV**-absorbing **sunscreen** agents.

SUMM We have observed that certain **mycosporine** amino acids which exist in the living tissue of the Pacific staghorn coral Acropora formosa are functional **UV**-absorbing agents (.lambda.max 310-332 nm) in corals inhabiting the shallow-water, tropical coral reef environment. While these naturally occurring enaminoketone compounds appear to be potentially attractive as commercial **UV**-agents, their utility is questionable because of the difficulty of isolating them from their biological source and because of their lack. . . We have proposed that certain synthetic vinylagous amide analogues of those natural products can be prepared which preserves their characteristic **UV**-absorbing chromophore within a chemically more stable structure and which typically have **UV**-absorption maxima (.lambda.max) in the wavelength region 288-340 nanometers (P.C.T. Pat. application No. PCT/AU85/00242) These synthetic analogues, however, proved to be. . .

SUMM . . . that a select group of cyclic vinylogous amide compounds which comprise a tetrahydropyridine moiety are particularly suitable for use in **sunscreen** compositions.

SUMM Accordingly we provide a **sunscreen** composition comprising as an effective component thereof at least one compound of formula I ##STR2## wherein: R.sup.1 is selected from. . .

SUMM In a further embodiment of the invention, there is provided a method of preparation of a **sunscreen** composition comprising mixing at least one compound of formula I with a carrier suitably adapted to allow application of said. . .

SUMM One group of compounds of the invention which may be used in preparation of **sunscreen** compositions include compounds of formula Ia ##STR20## wherein R.sup.3, R.sup.4, R.sup.5 and R.sup.6 are as hereinbefore defined in relation to. . .

SUMM The **UV**-B region of ultra violet radiation (290-320 nm) has long been known to cause damage to skin but more recently concern has been expressed over the effect of **UV**-A radiation (above 320

nm).

SUMM . . . the present invention may be prepared comprising one or more compounds of formula I and may provide screening in the **UV**-A region, the **UV**-B region or in both of these regions.

SUMM A specific example of a **sunscreen** formulation which may be used in preparation of compositions of the present invention includes the following

SUMM

Sunscreen lotion composition

	% w/w
Methy para-hydroxy benzoate	0.25
Propyl para-hydroxy benzoate	0.10
Cetyl/Stearyl 2-Ethylhexanoate	2.00
"CARBOMER" 491 thickener (cross linked acrylic acid polymer)	0.45
Phenyl trimethicone	1.00
Stearic Acid	3.00
Sodium Hydroxide	0.15
Phenoxyethanol	0.30
Isopropyl Isostearate	5.00
Antioxidant (BHA, BHT, ascorbates, tocopherols)	0.08
Glyceryl Monostearate & PEG 100 Stearate	1.00
Fragrance	0.10
Sunscreen Compound	6.00
Disodium EDTA	0.05
Treated water	80.52

("CARBOMER" is a trade mark)

DETD TABLE 2

Compound No.	Appearance	**UV** spectra .lambda. max (nm) log E	'H N.M.R. .delta. in ppm (CDCl.sub.3)
1	pale yellow	312 4.47	1.20 s. . .

DETD **Sunscreen** compositions were prepared using the components shown in table 2.

CLM What is claimed is:

1. A **sunscreen** composition comprising an effective **sunscreening** amount of at least one compound of formula I. ##STR45## wherein: R.sup.1 is selected from the group consisting of: C.sub.1. . .

2. A **sunscreen** composition according to claim 1 wherein in the compound of formula I: R.sup.1 is selected from the group consisting of:. . .

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FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003

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L1       127629 S SUNSCREEN? OR UV
L2         2960 S CAROTENOID?
L3         1152 S L1 AND L2
L4          941 S POLYPHENOLIC
L5            8 S L3 AND L4
L6            1 S US5712311/PN
L7            1 S L6 AND L2
L8            0 S L4 AND L7
L9            7 S SCYTONEMIN
L10      122030 S AMINO ACID?
L11           0 S L10 AND L6
L12           1 S US5422247/PN
L13           1 S US3920834/PN
L14           1 S L12 AND L2
L15           1 S L13 AND L2
L16           0 S L10 AND L15
L17           0 S L13 AND L10
L18           1 S L12 AND L10
L19       45380 S TRYPTOPHAN? OR TYROSINE?
L20         404 S L3 AND L19
L21           0 S L20 AND L9
L22           7 S L9 AND L1
L23           2 S L4 AND L20
L24           0 S L4 AND L12
L25           3 S MYCOSPORINE?
L26           3 S L25 AND L1

=> s l5 and l9
L27           0 L5 AND L9

=> s phenolic and l12
         65340 PHENOLIC
L28           0 PHENOLIC AND L12

=> s algae
L29       10772 ALGAE

=> s algae? or plant?
         11023 ALGAE?
        244947 PLANT?
L30     249499 ALGAE? OR PLANT?

=> s l30 and l12
L31           1 L30 AND L12

=> d kwic

L31  ANSWER 1 OF 1  USPATFULL on STN
PI     US 5422247              19950606                                <--
SUMM   . . . it is preferable to use biological sources to produce
       beta-carotene. The carotenoid is known to be synthesized by most green
       plants as well as by certain algae (e.g., Dunaliella),
       fungi (e.g., Ascomycetes and Deuteromycetes), cyanobacteria and
       photosynthetic bacteria. Naturally-occurring Zygomycetes of the order
       Mucorales, family Choanephoraceae, which. . .
DETD   . . . to: inorganic nitrogen compounds, such as ammonium salts; and
       substances of animal, vegetable and/or microbial origin, such as animal
       fats, plant oils, protein hydrolysates, microbial biomass
       hydrolysates, soy meal, fish meal, meat meal, meat extract, peptone,
       tryptone, corn steep liquor, yeast. . .
DETD   . . . which can degrade or otherwise inactivate light-sensitive
       compounds, and which can cause tissue damage (including cell and organ
```

damage) in **plants** and animals. An effective amount of beta-carotene is an amount which effectively prevents or reduces damage caused by reactive oxygen. . .

```
=> s cyanobacteri?
L32       1227 CYANOBACTERI?

=> s l32 and l12
L33          1 L32 AND L12

=> d kwic

L33  ANSWER 1 OF 1  USPATFULL on STN
PI     US 5422247              19950606                              <--
SUMM   . . . to be synthesized by most green plants as well as by certain
       algae (e.g., Dunaliella), fungi (e.g., Ascomycetes and Deuteromycetes),
       cyanobacteria and photosynthetic bacteria. Naturally-occurring
       Zygomycetes of the order Mucorales, family Choanephoraceae, which
       includes the genera Blakeslea, Choanephora, Mucor, Parasitella,
       Phycomyces,. . .


=> d his

     (FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003)

     FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003
L1        127629 S SUNSCREEN? OR UV
L2          2960 S CAROTENOID?
L3          1152 S L1 AND L2
L4           941 S POLYPHENOLIC
L5             8 S L3 AND L4
L6             1 S US5712311/PN
L7             1 S L6 AND L2
L8             0 S L4 AND L7
L9             7 S SCYTONEMIN
L10       122030 S AMINO ACID?
L11            0 S L10 AND L6
L12            1 S US5422247/PN
L13            1 S US3920834/PN
L14            1 S L12 AND L2
L15            1 S L13 AND L2
L16            0 S L10 AND L15
L17            0 S L13 AND L10
L18            1 S L12 AND L10
L19        45380 S TRYPTOPHAN? OR TYROSINE?
L20          404 S L3 AND L19
L21            0 S L20 AND L9
L22            7 S L9 AND L1
L23            2 S L4 AND L20
L24            0 S L4 AND L12
L25            3 S MYCOSPORINE?
L26            3 S L25 AND L1
L27            0 S L5 AND L9
L28            0 S PHENOLIC AND L12
L29        10772 S ALGAE
L30       249499 S ALGAE? OR PLANT?
L31            1 S L30 AND L12
L32         1227 S CYANOBACTERI?
L33            1 S L32 AND L12
```

```
=> s l1 and l9
L34           7 L1 AND L9

=> s l2 and l34
L35           4 L2 AND L34

=> d 1-4 ibib abs

L35  ANSWER 1 OF 4  USPATFULL on STN
ACCESSION NUMBER:        2003:37219  USPATFULL
TITLE:                   Process for the preparation of an extract with
                         carotenoids, UV absorption,
                         antibacterial and pH indicating properties from a
                         deep-sea bacterium
INVENTOR(S):             Bharathi, Ponnapakkam Adikesavan Loka, Dona Paula,
                         INDIA
                         Nair, Shanta, Dona Paula, INDIA
                         Chandramohan, Dorairajasingham, Dona Paula, INDIA

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2003026863      A1   20030206
APPLICATION INFO.:       US 2001-825406     A1   20010403  (9)
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    Cooper & Dunham LLP, 1185 Avenue of the Americas, New
                         York, NY, 10036
NUMBER OF CLAIMS:        19
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      5 Drawing Page(s)
LINE COUNT:              618
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       Accordingly the present invention provides a process for the preparation
         an alcoholic extract with Carotenoids, UV
         absorption, antibacterial and pH indicating properties from a deep-sea
         bacterium which comprises a method for growing the cells in a medium
         with salinity ranging from 1.5 to 3% for 3-4 days at 28 +/-2.degree. C.
         and harvesting them to prepare an extract which shows the properties of
         carotenoids (yellow/orange coloration), UV absorption,
         antibacterial and pH indicator properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L35  ANSWER 2 OF 4  USPATFULL on STN
ACCESSION NUMBER:        96:31578  USPATFULL
TITLE:                   Indole alkaloids useful as UV protective and
                         anti-inflammatory agents
INVENTOR(S):             Gerwick, William H., Corvallis, OR, United States
                         Castenholz, Richard, Elmira, OR, United States
                         Garcia-Pichel, Ferran, Breman, Germany, Federal
                         Republic of
                         Proteau, Philip J., Murray, UT, United States
PATENT ASSIGNEE(S):      The Regents Of The University Of California, Oakland,
                         CA, United States (U.S. corporation)

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 5508026                19960416
APPLICATION INFO.:       US 1995-503448            19950717  (8)
RELATED APPLN. INFO.:    Division of Ser. No. US 1994-297022, filed on 29 Aug
                         1994, now patented, Pat. No. US 5461070
DOCUMENT TYPE:           Utility
```

FILE SEGMENT: Granted
PRIMARY EXAMINER: Ramsuer, Robert W.
LEGAL REPRESENTATIVE: Poms, Smith, Lande & Rose
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 374
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Indole alkaloid compounds having the formula ##STR1## where R and R' are H, an alkyl group having up to 5 carbon atoms or --CO--(CH.sub.2).sub.n --CH.sub.3 where n=0 to 16. The indole alkaloid compounds and their reduction products are useful as both **UV** protective and anti-inflammatory agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L35 ANSWER 3 OF 4 USPATFULL on STN
ACCESSION NUMBER: 96:20887 USPATFULL
TITLE: Indole alkaloids useful as **UV** protective and anti-inflammatory agents
INVENTOR(S): Gerwick, William H., Corvallis, OR, United States
Jacobs, Robert S., Santa Barbara, CA, United States
Castenholz, Richard, Elmira, OR, United States
Garcia-Pichel, Ferran, Bremen, Germany, Federal Republic of
Grace, Krista J. S., Goleta, CA, United States
Proteau, Philip J., Murray, UT, United States
Rossi, James, Corvallis, OR, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5498405		19960312
APPLICATION INFO.:	US 1995-503384		19950717 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-297022, filed on 29 Aug 1994, now patented, Pat. No. US 5461070
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
ASSISTANT EXAMINER: Ramsuer, Robert W.
LEGAL REPRESENTATIVE: Poms, Smith, Lande & Rose
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
LINE COUNT: 399
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Indole alkaloid compounds having the formula ##STR1## where R and R' are H, an alkyl group having up to 5 carbon atoms or --CO--(CH.sub.2).sub.n --CH.sub.3 where n=0 to 16. The indole alkaloid compounds and their reduction products are useful as both **UV** protective and anti-inflammatory agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L35 ANSWER 4 OF 4 USPATFULL on STN
ACCESSION NUMBER: 95:94936 USPATFULL
TITLE: Anti-flammatory method using indole alkaloids
INVENTOR(S): Gerwick, William H., Corvallis, OR, United States
Jacobs, Robert S., Santa Barbara, CA, United States
Castenholz, Richard, Elmira, OR, United States
Garcia-Pichel, Ferran, Bremen, Germany, Federal Republic of
Grace, Krista J. S., Goleta, CA, United States
Proteau, Philip J., Murray, UT, United States

09/830193

	Rossi, James, Corvallis, OR, United States		
PATENT ASSIGNEE(S):	The Regents of the University of California, Oakland, CA, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5461070		19951024
APPLICATION INFO.:	US 1994-297022		19940829 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Rainsuer, Robert W.		
LEGAL REPRESENTATIVE:	Poms, Smith, Lande & Rose		
NUMBER OF CLAIMS:	6		
EXEMPLARY CLAIM:	1		
LINE COUNT:	380		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Indole alkaloid compounds having the formula ##STR1## where R and R' are H, an alkyl group having up to 5 carbon atoms or --CO--(CH.sub.2).sub.n --CH.sub.3 where n=0 to 16. The indole alkaloid compounds and their reduction products are useful as both **UV** protective and anti-inflammatory agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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=> s us5508026/pn
L36          1 US5508026/PN

=> d his

     (FILE 'HOME' ENTERED AT 12:06:56 ON 22 SEP 2003)

     FILE 'USPATFULL' ENTERED AT 12:07:21 ON 22 SEP 2003
L1       127629 S SUNSCREEN? OR UV
L2         2960 S CAROTENOID?
L3         1152 S L1 AND L2
L4          941 S POLYPHENOLIC
L5            8 S L3 AND L4
L6            1 S US5712311/PN
L7            1 S L6 AND L2
L8            0 S L4 AND L7
L9            7 S SCYTONEMIN
L10      122030 S AMINO ACID?
L11           0 S L10 AND L6
L12           1 S US5422247/PN
L13           1 S US3920834/PN
L14           1 S L12 AND L2
L15           1 S L13 AND L2
L16           0 S L10 AND L15
L17           0 S L13 AND L10
L18           1 S L12 AND L10
L19       45380 S TRYPTOPHAN? OR TYROSINE?
L20         404 S L3 AND L19
L21           0 S L20 AND L9
L22           7 S L9 AND L1
L23           2 S L4 AND L20
L24           0 S L4 AND L12
L25           3 S MYCOSPORINE?
L26           3 S L25 AND L1
L27           0 S L5 AND L9
L28           0 S PHENOLIC AND L12
L29       10772 S ALGAE
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L30      249499 S ALGAE? OR PLANT?
L31           1 S L30 AND L12
L32        1227 S CYANOBACTERI?
L33           1 S L32 AND L12
L34           7 S L1 AND L9
L35           4 S L2 AND L34
L36           1 S US5508026/PN

=> s l36 and l1
L37           1 L36 AND L1

=> s l37 and l2
L38           1 L37 AND L2

=> s l38 and l9
L39           1 L38 AND L9

=> s l10 and l39
L40           0 L10 AND L39

=> s l12 and l10
L41           1 L12 AND L10

=> d kwic

L41  ANSWER 1 OF 1  USPATFULL on STN
PI     US 5422247              19950606                              <--
DETD   . . . hydrolysates, microbial biomass hydrolysates, soy meal, fish
       meal, meat meal, meat extract, peptone, tryptone, corn steep liquor,
       yeast extract, and amino acids.


=> d l26 1-3 ibib abs

L26  ANSWER 1 OF 3  USPATFULL on STN
ACCESSION NUMBER:        2003:37219  USPATFULL
TITLE:                   Process for the preparation of an extract with
                         carotenoids, UV absorption, antibacterial and
                         pH indicating properties from a deep-sea bacterium
INVENTOR(S):             Bharathi, Ponnapakkam Adikesavan Loka, Dona Paula,
                         INDIA
                         Nair, Shanta, Dona Paula, INDIA
                         Chandramohan, Dorairajasingham, Dona Paula, INDIA

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2003026863      A1   20030206
APPLICATION INFO.:       US 2001-825406     A1   20010403  (9)
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    Cooper & Dunham LLP, 1185 Avenue of the Americas, New
                         York, NY, 10036
NUMBER OF CLAIMS:        19
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      5 Drawing Page(s)
LINE COUNT:              618
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     Accordingly the present invention provides a process for the preparation
       an alcoholic extract with Carotenoids, UV absorption,
       antibacterial and pH indicating properties from a deep-sea bacterium
       which comprises a method for growing the cells in a medium with salinity
       ranging from 1.5 to 3% for 3-4 days at 28 +/-2.degree. C. and harvesting
```

them to prepare an extract which shows the properties of carotenoids (yellow/orange coloration), **UV** absorption, antibacterial and pH indicator properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L26 ANSWER 2 OF 3 USPATFULL on STN

ACCESSION NUMBER:	94:86519 USPATFULL
TITLE:	**Sunscreen** compounds
INVENTOR(S):	Bird, Graham, Victoria, Australia Fitzmaurice, Neil, Victoria, Australia Dunlap, Walter C., Queensland, Australia Chalker, Bruce E., Queensland, Australia Bandaranayake, Wickramasinghe M., Queensland, Australia
PATENT ASSIGNEE(S):	ICI Australia Operations Proprietary Limited, Melbourne, Australia (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5352793		19941004
APPLICATION INFO.:	US 1990-618610		19901127 (7)
RELATED APPLN. INFO.:	Division of Ser. No. US 1988-236530, filed on 26 May 1988, now patented, Pat. No. US 5100496		

	NUMBER	DATE
PRIORITY INFORMATION:	AU 1986-8208	19860926
	AU 1986-9230	19861125

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Cintins, Marianne M.
ASSISTANT EXAMINER:	Spivack, Phyllis G.
LEGAL REPRESENTATIVE:	Cushman, Darby & Cushman
NUMBER OF CLAIMS:	11
EXEMPLARY CLAIM:	1
LINE COUNT:	1320

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to **sunscreen** compounds of formula I ##STR1## wherein R.sup.1 is selected from alkyl, alkenyl, alkynyl substituted alkyl, substituted alkenyl, phenyl, substituted phenyl, substituted benzyl, cycloalkyl, cycloalkenyl, substituted cycloalkyl, substituted cycloalkenyl;

R.sup.2 is selected from hydrogen, alkyl and alkoxy;

R.sup.3 is selected from alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, phenyl, benzoyl, substituted phenyl, substituted benzyl, substituted benzoyl, cycloalkyl, substituted cycloalkyl, cycloalkenyl, substituted cycloalkenyl, alkanyoyl, substituted alkanoyl, the group ORORO R.sup.9 wherein R is a bivalent hydrocarbon radical and R.sup.9 is alkyl, alkenyl, phenyl benzyl, substituted phenyl, substituted benzyl;

R.sup.4 is alkyl or alkoxy;

n is an integer from 0 to 4; and

R.sup.5 and R.sup.6 are independently selected from alkyl, alkoxy, alkanoyl, alkanoyl substituted by hydroxyl or alkoxycarbonyl.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L26 ANSWER 3 OF 3 USPATFULL on STN

ACCESSION NUMBER: 91:22460 USPATFULL

TITLE: **Sunscreen** compositions and compounds for use therein

INVENTOR(S): Bird, Graham, 14 Roseberry Street, Ascot Vale 3032, Victoria, Australia
Fitzmaurice, Neil, 44 Tooronga Road, Malvern East 3144, Victoria, Australia
Dunlap, Walter C., 70 Cook Street, North Ward, Townsville 4810, Queensland, Australia
Chalker, Bruce E., 3178 Eyre Street, North Ward, Townsville 4810, Queensland, Australia
Bandaranayake, Wickramasinghe M., 12 Lupin Court, Annansdale, Murray, Townsville 4812, Queensland, Australia

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5000946		19910319	
	WO 8802251		19880407	
APPLICATION INFO.:	US 1988-236530		19880526	(7)
	WO 1987-AU330		19870925	
			19880526	PCT 371 date
			19880526	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	AU 1986-8208	19860926
	AU 1986-9230	19861128

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Ore, Dale R.
LEGAL REPRESENTATIVE: Cushman, Darby & Cushman
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 1324
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to **sunscreen** compositions comprising an effective component at least one compound of formula I ##STR1## wherein R.sup.1 is selected from alkyl, alkenyl, alkynyl substituted alkyl, substituted alkenyl, phenyl, substituted phenyl, substituted benzyl, cycloalkyl, cycloalkenyl, substituted cycloalkyl, substituted cycloalkenyl and polymeric groups;

R.sup.2 is selected from hydrogen, alkyl and alkoxy; and wherein R.sup.1 and R.sup.2 may form a carbocyclic ring which may be substituted;

R.sup.3 is selected from alkyl, sustituted alkyl, alkenyl, substituted alkenyl, alkynyl, phenyl, benzoyl, substituted phenyl, substituted benzyl, substituted benzoyl, cycloalkyl, substituted cycloalkyl, cycloalkenyl, substituted cycloalkenyl, alkanyoyl, substituted alkanoyl, polymeric groups, the group ORORORO.sup.9 wherein R is a bivalent hydrocarbon radical and R.sup.9 is alkyl, alkenyl, phenyl benzyl, substituted phenyl, substituted benzyl;

R.sup.4 is alkyl or alkoxy; n is an integer from 0 to 4; and

R.sup.5 and R.sup.6 are independently selected from alkyl, alkoxy, alkanoyl, alkanoyl substituted by hydroxyl or alkoxycarbonyl and R.sup.5 and R.sup.6 may form a spiro carbocyclic ring which may be substituted with alkyl;